

Contour Buffer Strips

Conservation Practice Job Sheet

332



Definition

Contour buffer strips are strips of perennial vegetation alternated down the slope with wider cultivated strips that are farmed on the contour. Contour buffers strips are usually narrower than the cultivated strips. Vegetation in strips consists of adapted species of grasses or a mixture of grasses and legumes.

Purpose

Contour buffer strips established on the contour can significantly reduce sheet and rill erosion. Strips slow runoff and trap sediment. Sediment, nutrients, pesticides, and other contaminants are removed from the runoff as they pass through the buffer strip. Buffer strips also provide food and nesting cover for wildlife.

Where used

Contour buffer strips are used on cropland subject to sheet and rill erosion. They are most suitable on uniform slopes ranging from 4 to 8 percent. These narrow strips of permanent vegetation are not part of the normal crop rotation. Contour buffer strips are also an excellent filter for runoff and will help improve surface water quality. The practice is more difficult to establish on undulating to rolling topography because of the difficulty of maintaining parallel strip boundaries across the hill slope or staying within row grade limits.



Requirements for establishing contour buffer strips include a minimum buffer strip width, with strips placed along the contour and farming operations that follow the approximate contour grade. Cultivated strip widths are determined by such variables as slope, soil type, field conditions, climate, and erosion potential. Cultivated strip widths may be adjusted to accommodate machinery widths. Buffer strips can be used as turn areas if care is taken to minimize disturbance to soil and vegetation. Waterways or diversions are needed where runoff collects and concentrated flow erosion is a problem. Contour buffer strips can be established between terraces to enhance treatment of the hill slope. A ratio of cultivated width to buffer strip width of between 9:1 and 4:1 is desirable. For reducing sheet and rill erosion, buffer strip width must be at least 15 feet for grasses or grass-legume mixtures and at least 30 feet for legumes alone.

Resource management system

Contour buffer strips are normally established as part of a resource management system for a conservation management unit. They are concurrently applied with other practices, such as residue management, conservation crop rotation, and contour farming. Cultivated strip widths are determined by such variables as slope, soil type, field conditions, climate, and erosion potential. Species to use for contour buffer strips depend on soil types, climate, and use by wildlife.

Wildlife

When planning for wildlife, adjust contour buffer strip widths and plant species to meet the needs of the target wildlife species. Increase widths to 30 feet or wider depending on the requirements for nesting and escape cover of the target wildlife species. Avoid mowing during nesting periods.

Operation and maintenance

Mow buffer strips to maintain appropriate vegetative density and height for trapping sediment. Fertilize buffer strips according to soil test results. Spot seed or renovate buffer strip areas damaged by herbicides, equipment, or unusual rainfall events. Redistribute sediment accumulations as needed to maintain uniform sheet flow along the crop-strip boundary.

Specifications

Site-specific requirements are listed on the specifications sheet. Additional provisions are entered on the job sketch sheet. Specifications are prepared in accordance with the NRCS Field Office Technical Guide. See practice standard Contour Buffer Strips, code 332.

Contour Buffer Strips – Job Sheet

Landowner _____ Field
number _____

Purpose (check all that apply)	
<input type="checkbox"/> Reduce sheet and rill erosion	<input type="checkbox"/> Reduce transport of sediment and other water-borne contaminants downslope, on-site or off-site
<input type="checkbox"/> Enhance wildlife (target species: _____)	

Layout	Strip 1	Strip 2	Strip 3	Strip 4
Cultivated strip width (feet)				
Buffer strip width (feet)				
Buffer strip length (feet)				
Area in buffer strip (acres)				

Plant Materials (species/cultivars)	Seeding Rate (lbs/acre of pure live seed)	Seeding Date
Strip 1:		
Strip 2:		
Strip 3:		
Strip 4:		

Soil Amendments and Fertilization	Strip 1	Strip 2	Strip 3	Strip 4
Lime (tons/acre)				
N Fertilizer – (lbs/acre)				
P ₂ O Fertilizer – (lbs/acre)				
K ₂ O Fertilizer – (lbs/acre)				

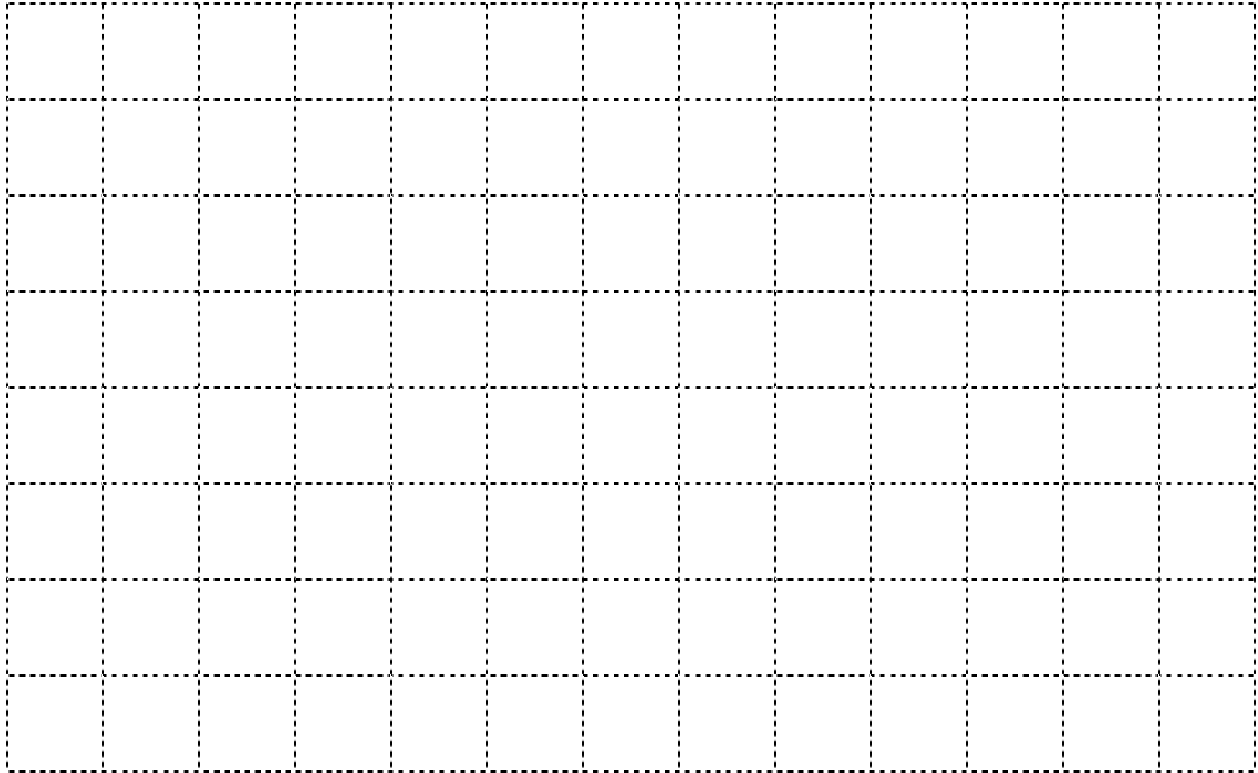
Site Preparation <i>Prepare a firm seedbed. Apply lime and fertilizer as indicated by soil testing. Additional requirements:</i>
Planting Methods <i>Drill grass and legume seed _____ inches deep uniformly over area. Establish vegetation according to the specified seeding rate. If necessary, mulch newly seeded area with _____ tons per acre of mulch material. A small grain crop may be needed as a companion crop at the rate of _____ pounds per acre (clip or harvest before it heads out). Additional requirements:</i>
Operation and Maintenance <i>Maintain original width and length of contour buffer strips. Harvest, mow, reseed, and fertilize as necessary to maintain plant density and vigorous plant growth. Inspect after major storms, remove trapped sediment, and repair eroding areas. Shut off pesticide sprayers when turning on a buffer strip. Additional requirements:</i>

--

Contour Buffer Strips – Job Sheet

If needed, an aerial view or a side view of the practice can be shown below. Other relevant information, complementary practices and measures, and additional specifications may be included.

Scale 1"= _____ ft. (NA indicates sketch not to scale: grid size=1/2" by 1/2")



Additional Specifications and Notes:

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs and marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication program information (Braille, large print, audiotape, etc.) should contact the USDA Office of Communications (202) 720-2791.

To file a complaint of discrimination write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.